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## A New Fish, *Listracanthus eliasi*, from the Pennsylvanian of Nodaway County, Missouri

CLAUDE W. HIBBARD,

Museum of Vertebrate Paleontology, University of Kansas, Lawrence

ABSTRACT: *Listracanthus eliasi* Hibbard n. sp., based on complete spine and two associated spines, smallest known species of the genus *Listracanthus*.

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AMONG some ichthyodorulites in the Museum of Vertebrate Paleontology, collected by Prof. M. K. Elias of the Kansas Geological Survey, are three spines representing an undescribed form of *Listracanthus*.

*Listracanthus eliasi* n. sp.

(Pl. XIX)

*Types*: Holotype No. 884F, University of Kansas Museum of Vertebrate Paleontology. Complete spine with truncated base. Paratypes, K.U.M.V.P. 885F-6F; dorsal part of spines lacking base.

*Horizon and Type Locality*: Taken from a concretion a few feet above Elmo coal, in the Cedarvale shale, Wabaunsee group, Virgil series of the Middle Pennsylvanian of Mid-Continent. Taken by M. K. Elias, 1934, at Carpenter's coal mine, 2 miles west and 3 miles south of Burlington Junction, Nodaway county, Missouri.

*Diagnosis*: The spine is delicate, flattened and very thin. The sides contain from nine to ten longitudinal carinae at the base of the spine. Only five longitudinal carinae continue throughout the length of the spine, these being the five nearest the convex edge. The outermost carinae on the concave side of the spine at its base are lost as the spine gradually tapers off from the base to its apex. The concave side of the spine is set with slender, sharply pointed, closely packed teeth which are directed upward. The teeth are

missing from the convex side with the exception of the extreme tip of the spine where a few scattered teeth may occur. The spine narrows abruptly above the truncated base on the concave side, giving a gentle arched appearance. The holotype is 15 mm. in length; width of truncated base, 3 mm.; greatest width of spine above base, 2 mm.; the teeth first appear on the concave side of the spine 4 mm. from the base, on the convex side, 13 mm. Nine longitudinal carinae are present with only five extending to the tip of the spine. The paratypes agree with the holotype except that the bases of the spines are missing. No. 886F is 15 mm. long, having ten longitudinal carinae, only five continuing to tip of the spine. No. 885F with base missing is 15.5 mm. in length and possessing ten longitudinal carinae.

*Listracanthus eliasi* may be distinguished from the other forms by its small size and the fact that the teeth are nearly missing on the convex surface and confined only to the tip of the spine. Though *Listracanthus* has been found in many localities in Europe it is one of the rarer forms found in the Pennsylvanian of North America, being known only from the coal measure of Ohio and Illinois; also from a single locality in Andrew county, Missouri, in the Cherokee shale just overlying the Springfield coal.

PLATE XIX

